
ENERGY QUEST 2018

OVERVIEW

The third International Conference on Energy Production and Management: The Quest for Sustainable Energy, followed the very successful meetings held in Yekaterinburg (2014) and Ancona (2016). The Conference was organised by the Wessex Institute, UK, represented by Dr Stavros Syngellakis, and the Ural Federal University, Russia, represented by Professor Elena Magaril.

The objective of the meeting was to propose solutions to problems arising from massive consumption of conventional, non-renewable energy sources, particularly hydrocarbons, which has such a detrimental effect on the environment. Reported new technological developments may lead to more efficient energy production and consumption but also promote a number of other ways of producing energy based on renewable resources such as solar, hydro, wind and geothermal.

OPENING OF THE CONFERENCE

The conference was opened by Dr Stavros Syngellakis who welcomed the delegates before explaining that the main objective of WIT is to promote the exchange of scientific information throughout the world. Apart from organising conferences in many disciplines, another way in which knowledge transfer is achieved is by the publication of conference proceedings and journals, through its publishing arm, WIT Press. Stavros described briefly recent research and development activities at the Institute emphasising the links of such projects to energy production.



Professor Elena Magaril and Dr Stavros Syngellakis who opened the conference

Professor Elena Magaril also welcomed the delegates in the name of her institution. She paid homage to the originator of the conference series, Professor Carlos A. Brebbia, and invited the delegates to applaud his contribution to their organisation and success. Elena referred briefly to the previous events in the series, starting from the first successful meeting at Yekaterinburg culminating in the establishment of the Energy Quest journal. She pointed out that the manner in which energy is produced and utilised is an indicator of a country's level of civilisation. She also mentioned the interdisciplinary character of research and development in this area. Finally, she expressed the wish that Carlos's legacy would be preserved and thanked the delegates for their contributions.

KEYNOTE ADDRESS

Professor Elena Magaril then gave a keynote address entitled:

“Improving the efficiency of the stabilization columns in oil and gas processing” co-authored with D. Ermolin and R. Magaril, also from Ural Federal University, Russia.

INVITED SPEAKERS

There were a series of invited presentations, as follows:

- “Design, installation of high voltage cables at sea”, **Ove Gudmestad**, University of Stavanger, Norway.
- “The behaviour of single-shaft CCGT units at frequency drop in the connected grid”, **Viktor Silbermann**, Fichtner GmbH & Co KG, Germany.
- “Special waste valorisation and renewable energy generation under a circular economy: which priorities?” **Elena Rada**, Insubria University, Italy.
- “A cogeneration power plant to integrate cold ironing and district heating and cooling”, **Giorgio Passerini**, Marche Polytechnic University, Italy.
- “A transition to knowledge-intensive service activities in power industry: a theoretical framework”, **Mikhail Kozhevnikov**, Ural Federal University, Russia.

CONFERENCE SESSIONS

The papers presented during the Conference were classified under the following session headings:

- Energy efficiency
- Energy distribution
- Renewable energy
- Waste to energy
- Energy sustainability under a circular economy
- Energy management
- Energy production

There were many occasions for holding informal discussions during coffee and lunch breaks, as well as the excursion to the City of Winchester.

SPECIAL EVENTS DURING THE CONFERENCE

During the second day of the conference, delegates for Energy Quest joined their colleagues attending the 41st BEM/MRM conference as well as other colleagues and friends from Ashurst Lodge and Elsevier in a tribute to the founder of Wessex Institute, Professor Carlos A. Brebbia.

This session was opened by Professor Alex Cheng from the University of Mississippi who welcomed everyone to this special occasion then referred briefly to Carlos's personality as a friend and colleague. Then Dr Stavros Syngellakis spoke about the establishment and development of the Wessex Institute as Carlos's unique achievement, described recent research projects and the Institute's knowledge transfer activities carried out under his leadership. Ms Juliet Jones from the Wessex Institute gave a chronology of key events in Carlos's personal and professional life. This was followed by a presentation focusing on Carlos' contribution to the boundary element method by Professor Alex Cheng. Alex explained how inspiration from earlier work on boundary integral equations led Carlos to the establishment of the method not only as a mainstream academic pursuit but also as a valuable tool for solving practical engineering problems. The session ended with short contributions by several delegates from both conferences who knew Carlos well and made moving references to their personal and professional association with him.

In the afternoon of the same day, a guided excursion to the historic city of Winchester was organised for the delegates. Significant city landmarks were visited, among them Winchester Cathedral, one of the largest in Europe; founded in AD642, it reflects 15 centuries of English history. The author Jane Austen is buried within the grounds of the cathedral and the house where she lived her last days and died is also one other important Winchester site.

CONFERENCE PUBLICATION

Papers presented at this conference appear in Vol. 222 of the WIT Transactions on Ecology and the Environment (ISSN: 1743-3541, ISBN 978-1-78466-293-6). All papers presented at the meetings are available Open Access in the eLibrary of the Wessex Institute (<https://www.witpress.com/elibrary>), from where they can be freely downloaded by any interested parties.

A few papers have been selected for publication in the International Journal of Energy Production and Management. This journal covers the different aspects of energy research, development and recovery from both primary and renewable sources; power generation, storage and distribution; planning and management.





ISAC dinner

ISAC DINNER

The meeting of the International Scientific Advisory Committee (ISAC) of the Conference took place over dinner in a private room of the Balmer Lawn Hotel, Brockenhurst which was also the venue of the conference. Dr Syngellakis thanked on behalf of the Wessex Institute the members of the committee for their support in maintaining the high standards of the Conference. The discussion that followed focused on possible new topics to be included in the Call for Papers, changes in the composition of the committee and venues for the 2020 conference.

CONFERENCE DINNER

The conference dinner took place on Wednesday evening in the Beech Room, one of the private function rooms of Carey's Manor Hotel, Brockenhurst, which is within walking distance of the conference venue. Carey's Manor enjoys a high reputation as a hotel and for its restaurants. The table was stylishly laid and candles and gentle music created a relaxed atmosphere, with wonderful service from our dedicated waiter and team. A group photograph was taken outside in the beautiful grounds, to mark the occasion.

The three course menu, accompanied by red and white wines from the Valle Central area of Chile, consisted of predominantly locally sourced ingredients which in many cases are organic and free range. All present found this to be a rich and satisfying meal and many took tea or coffee afterwards.

Professor Giorgio Passerini, representing WIT at the conference dinner, thanked both the delegates and the chairs of the two conferences, Professors Cheng and Magaril, for the success of both conferences and reflected on the dinner. He also said that he looked forward to the next in the series, for BEM in Coimbra next year and in 2020 for Energy Quest, at a venue to be arranged within the next 12 months.

Professor Alex Cheng added some comments about how Carlos was the driving force before for BEM and now the method and the conference relied on WIT members and conference participants to push it forward.

CLOSING OF THE CONFERENCE

In her closing remarks, Professor Elena Magaril thanked the participants for their contributions to the meeting as well as the interesting and productive discussions they generated. She also expressed gratitude to the Wessex Institute for the excellent organization of the conference, the superb facilities provided and the thoroughly enjoyable social events.

The meeting was closed by Professor Giorgio Passerini, on behalf of WIT, who also thanked all participants, expressing the hope that they enjoyed their stay in the New Forest and would attend the next conference in the series in 2020.



Delegates attending the conference dinner